

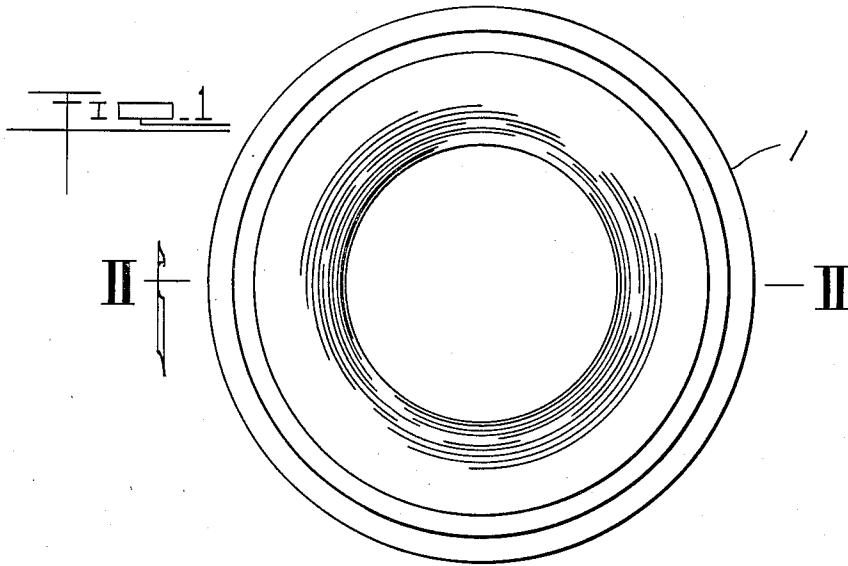
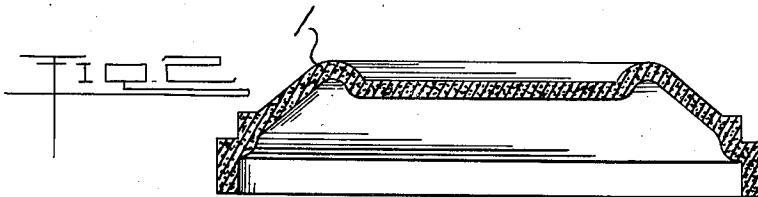
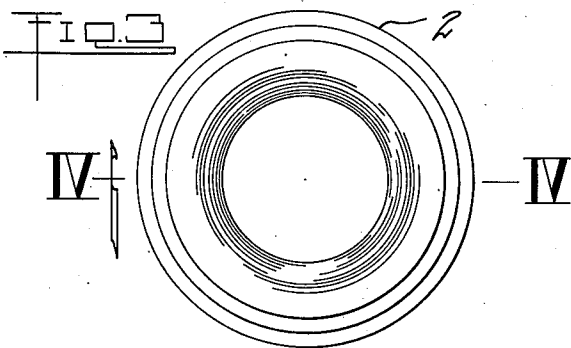
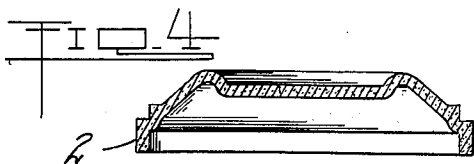
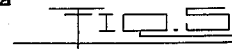
Aug. 13, 1940.

F. J. ROUTLEDGE

2,211,244

PROJECTABLE TARGET

Filed Oct. 13, 1939



65% Coal Tar Pitch
35% Lime Stone Dust
by weight.
melting point pitch
245°F

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UNITED STATES PATENT OFFICE

2,211,244

PROJECTABLE TARGET

Frederick J. Routledge, Monroe, Mich.

Application October 13, 1939, Serial No. 299,295

1 Claim. (Cl. 273—105.4)

This invention relates to objects to be thrown for checking skill and in game operations for marksmanship.

This invention has utility when incorporated in frangible targets of the clay pigeon type.

Referring to the drawing:

Fig. 1 is a plan view of a type of target of the normal clay pigeon variety;

Fig. 2 is a section on the line II—II, Fig. 1, showing the contour in section of this disk type of target;

Fig. 3 is a view on similar scale of the type of target of the invention herein;

Fig. 4 is a section on the line IV—IV, Fig. 3, of this specially adapted target; and

Fig. 5 is the outline of the composition as adopted for the target of Figs. 3 and 4.

The disclosure of the target of peculiar advantages herein is as adapted to a small gage shotgun. The achievement of importance is that as to a moving target or with a moving target the marksman has, under the type of firearm as selected, an effective range for operation. The experience herein as to the gun selected is normally one which may have a charge so dispensed that its scatter leaves only 25 per cent of hits in a 6 inch circle at 33 feet. A special firearm with the scatter control has meant that, with the DuPont or other powder, 120 #12 shot per charge at a 33 foot range, 85 per cent hit within a 6 inch circle. This closeness or reduction of scatter for the fine shot has meant, with the target herein disclosed, sufficient effectiveness for shattering such target.

In the build-up herein, while there is similarity to regulation target 1, target 2 has its diameter approximate $2\frac{3}{8}$ inches, with a $\frac{5}{8}$ inch depth, as against the target 1, which has approximately a 1 inch depth and about $4\frac{1}{4}$ inches in diameter.

In the composition herein, it is desirable that the set-up be one sufficiently fragile to respond in the scatter range. While in some practice a filler of as low as 10 per cent has been adopted, the range has run up to 20 to 40 per cent by weight, while the bituminous matter or pitch is from 175° to 275° melting point. The experience has worked out more efficiently with the filler as limestone dust, such as may be accumulated from crushing operations at a limestone quarry and such limestone as near Monroe, Michigan, at 35 per cent by weight, to 65 per cent by weight coal tar pitch of 245° F. melting point. The resulting target or pigeon, is one which seems to withstand climatic conditions from Northern Michigan to Texas against excessive fragile condition and as against melting down.

The proportions are further of worked-out projectile value, in that the target 1 area for poising approximates 14.1862 square inches as

against the area for projectile poising of target 2 of 6.890 square inches. The target 1, understood generally to be of the clay pigeon type, is believed to have the clay in the range of 60 to 65 per cent, and the bituminous matter for the balance. Such target 1 has a weight in the range of 3.636 ounces, while the weight of the target 2 is .800 ounce. The deductions from the foregoing are that the weight per square inch of poising area of the target 1 is .256 of an ounce, while that for the target 2 is .116 of an ounce.

Further tests for differences have been worked out. The target 1, when exposed to loading diametrically, experiences crushing at a load of 30 pounds, while the target 2 does not experience crushing until in the range of $3\frac{1}{2}$ to 5 pounds. A further check on the margin of distinction between the targets 1 and 2 is had in the instance wherein the target 2 has been produced by a remelting and casting of the material of the target 1 in the mold for target 2, and on such basis this target 1 composition in target 2 form has a resistance diametrically that responds to crushing at 14 pounds or approximately three times that of the target 2.

In the instance that a flat object be placed across the upper side when the target is resting on its major diameter rim, the target 1 in such position will carry a load up to 130 to 160 pounds before crushing. With the target 2 a load similarly placed is effective for crushing in the range of 30 to 40 pounds, or about one-fourth.

An intermediate check, wherein the composition of the target 1 was re-used in the mold of the target 2, shows that this old mold composition had resistance to crush at the range of 56 to 60 pounds.

It is believed importance attaches to these considerations of the tests, as the prime purpose in this target to check the performance of the marksman is the shatter for the target.

This application is a continuation-in-part of application for United States Letter Patent, Ser. No. 136,495, filed April 12, 1937, for Firearm, now Patent No. 2,185,523, January 2, 1940.

What is claimed and it is desired to secure by United States Letters Patent is:

A fragile disk-shaped projectable target of weight per unit area and of poising area each below that of normal target in regulation trap shooting, said target herein having capability of being shattered consistently up to a range of fifty feet by a charge so projected from a .22 caliber shotgun that at the range of thirty-three feet about 85% of number twelve shot may be within a six inch circle, the body of the target herein containing between ten and forty per cent powdered filler such as limestone dust, and a pitch binder residue therefor in a mechanical mixture.

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